

## Page 1 of 1

All amounts are calculated in domestic currency.

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
---------------------------------	-----------------------	------------	--	-----------------------	-------------------------------	------------------------	----------------------	------------------------------	--	----------------------------	----------

<b>Total Received Quantity:</b>	37.0000
<b>Total Qty to Inspect (PO U/M):</b>	0.0000
<b>Total Reject Quantity:</b>	0.0000
<b>Total Receipt Value:</b>	\$0.00
<b>Total Balance Due Quantity:</b>	0.0000



O'Neal High-Performance Metals Group



**Packing  
Slip**

ORDER NO.: 60633598

FROM: CRAN

PAGE 1

CUST NUMBER: 1203820 NET WGT:

8.243 REQ.DATE: 06/16/17 CONFIRMED

SOLD TO:

SHIP TO:

DART AEROSPACE LTD

DART AEROSPACE LTD

1270 ABERDEEN ST

1270 ABERDEEN ST

HAWKESBURY ON

HAWKESBURY ON

CANADA

CN K6A 1K7

ONTARIO CANADA

CN K6A 1K7

SALESPERSON: DONNA SMALLEY

SHIP BY: 06/09/17

TERMS: NET 30 DAYS

VIA: COMMON CARRIER

F.O.B.: SHIPPING POINT

FREIGHT: PREPAID

CUST ORD NO.: PO36617

RELEASE NO.:

RECEIVING PHONE:

LINE ITEM DESCRIPTION

WIDTH

LENGTH

0001 43260 D2024-T3 1 OD X .065 WA

12 FT ML

CLN#

ORD QTY

INVOICE QTY

SHIPPED QTY

WT

PCS

36.000 FT

36.000 FT

36.000 FT

8.243

3

\*\* 1 TEST REPORTS REQUIRED \*\*

\*\* 1 CERTS REQUIRED \*\*

ECCN: EAR99

PO:49341478 HT:F002012480001 PC: 3

Export License: NLR Expiration Date: 0/00/00

MLT:UNITED STATES MFG:UNITED STATES

CUSTOMER QTY: SLB/CL:219348

UOM

BROKERS KUEHNE AND NAGEL LTD

-----		PACK INFO		-----			
AREA	TYPE OF PKG	PKGS	GRS WEIGHT	WIDTH	LENGTH	HGHT	
NEW PEN	CARTON	1.000	18.243	4.0000	150.0000	4	
		Box No - TWPk17002090					
		1.000	18.243				

BY:

RT 000-

UNLOAD TYPE: NONE SPECIFIED

DATE SHIPPED

DATE FILLED

**THANK YOU FOR THIS ORDER**

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE  
PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL  
REVIEW.  
<http://www.twmetals.com/invoice-terms.html>

# KAISER ALUMINUM FABRICATED PRODUCTS

*Best in Class*

## CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
6573 W. WILLIS ROAD  
CHANDLER, AZ 85226

CUSTOMER PO NUMBER: M49341478-1		CUSTOMER PART NUMBER: 43260		PRODUCT DESCRIPTION: Drawn Seamless Tube/Pipe	
KAISER ORDER NUMBER: 219348	LINE ITEM: 001	SHIP DATE: 11/02/2015	KAISER LOT NUMBER: F00201248	ALLOY: 2024	TEMPER: T3
WEIGHT SHIPPED: 379.000 LB	QUANTITY: 138.000 PCS	B/L NUMBER: 220262	DIA/DAP/THKNS: 	WIDTH: 	LENGTH: 12.000 FT
SHIP TO: TW METALS INC 27 ENGLEHARD DRIVE EXIT 8A OFF NJ TPK MONROE TWP, NJ 08831 USA			SOLD TO: TW METALS INC 760 CONSTITUTION DRIVE SUITE 204 EXTON, PA 19341 USA		

### Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	ELONG%	HARDNESS	CON% IACS	BEND
F00201248	0001	1	69.9	50.0	22.5	N/A	N/A	N/A

### Chemical Composition (wt%), Aluminum Remainder

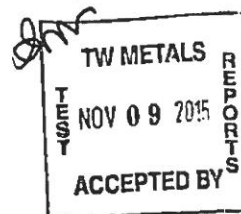
LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.50	0.50	4.90	0.90	1.80	0.10	0.25	0.15	NA	NA	NA	0.05	0.15
Minimum	0.00	0.00	3.80	0.30	1.20	0.00	0.00	0.00	NA	NA	NA	0.00	0.00
D82179	.10	.14	4.60	.72	1.36	.01	.05	.02	.00	.00	.01	.05	.06

### Applicable Requirements:

Description: OD: 1.0000"; Wall: 0.0650"; Round @  
AMS-4088K AMS-WW-T-700/3A ASTM B210-12  
This Product Complies to FAR BAA, DFARS BAA, FAR TAA  
COMPLIES TO DIN EN 10204 JAN 2005  
No Weld Repair. Mercury Free.

### Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA  
MATERIAL COMPLIES WITH FAR BAA (FAR 52.225-1, BUY AMERICAN ACT- SUPPLIES), DFARS BAA  
(DFARS 252.225-7001 BUY AMERICAN ACT & BAL OF PAYMENTS PROG), AND FAR TAA (FAR 52.225-5  
TRADE AGREEMENTS).



Plant Serial: 00020683  
Kaiser Order Number: 219348  
Line Item: 001

**KAISER**  
**ALUMINUM**  
**FABRICATED PRODUCTS**

*Best in Class*

**CERTIFIED TEST REPORT**

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM  
FABRICATED PRODUCTS, LLC  
6573 W. WILLIS ROAD  
CHANDLER, AZ 85226

**CERTIFICATION**

Kaiser Aluminum Fabricated Products, LLC ('Kaiser') hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with the applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms & conditions of sale. Test reports are on file subject to examination.

Nathaniel Stevens, Quality Manager





O'Neal High-Performance Metals Group



Packing  
Slip

ORDER NO.: 60633598

FROM: CRAN

PAGE 2

CUST NUMBER: 1203820 NET WGT: 8.243 REQ.DATE: 06/16/17 CONFIRMED  
SOLD TO: SHIP TO:  
DART AEROSPACE LTD DART AEROSPACE LTD  
1270 ABERDEEN ST 1270 ABERDEEN ST  
HAWKESBURY ON HAWKESBURY ON  
CANADA CN K6A 1K7 ONTARIO CANADA CN K6A 1K7  
  
SALESPERSON: DONNA SMALLEY SHIP BY: 06/09/17  
TERMS: NET 30 DAYS 27 ENGLEHARD DRIVE  
F.O.B.: SHIPPING POINT MONROE TWP NJ 08831  
CUST ORD NO.: PO36617  
VIA: COMMON CARRIER  
FREIGHT: PREPAID  
RELEASE NO.:  
RECEIVING PHONE:

"TW Metals MSDS data is available on our web site at [www.twmetals.com](http://www.twmetals.com). MSDS data can be found under the Technical Resources Tab, Product Statistics & Data and the TW Metals MSDS's heading. If you do not have web site access you may telephone 610-458-1300 and we will mail or fax a copy of our current MSDS data to your location."

"CERTIFICATE OF CONFORMANCE"

"TW Metals certifies that the material supplied on this purchase order and contained in the heat/lot number referenced above has been manufactured, inspected, and tested in accordance with the material specification. These records are on file at TW Metals. Packaging material for shipments to Europe and China consists of manufactured wood products and complies with the European emergency measures for coniferous non-manufactured wood packing material"

Authorized Test Report Clerk Cornel Leamon Date: 6/09/17

These commodities have been exported from the United States in accordance with the U.S. export control laws, export administrations regulations. Diversion contrary to U.S. law prohibited.

1  
**THANK YOU FOR THIS ORDER**

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL REVIEW.  
<http://www.twmetals.com/invoice-terms.html>

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M20241371.000/W.065  
 DATE: 17-06-19

PO / BATCH NO.: P030617/M137776

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 36'  
 QUANTITY INSPECTED: 36'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: W.065  
 THICKNESS RECEIVED: W.063  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	Y	(N)	
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	HT # F00201248
CORRECT MATERIAL IDENTIFICATION	(Y)	N	ASTM A213-12 acceptable per email.
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	(Y)	N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

testers located in the Quality Office

<b>QC 18 INSPECTION</b> INSPECTED BY: <u>DAS 39 / 9-89</u> DATE: <u>17-06-19</u>	<b>ENGINEERING SIGNOFF (if required)</b> SIGNED OFF BY: _____ DATE: _____
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Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

## Patrick Duval

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**From:** Patrick Smith  
**Sent:** Wednesday, June 28, 2017 8:17 AM  
**To:** Chris Provencal; Linda Lacelle  
**Cc:** Mario Poulin; Robert Aboud; Chantal Lavoie; Eric Downing; Patrick Duval; David Duval  
**Subject:** RE: material M2024T3T

Chris,

I spoke to the engineering group at Airbus regarding the Trailing Bar Assembly SK145-0114 and they have started the process to update the drawing with the correct material specification.

They predict it will take up to two weeks to complete this, but until then they will make a concession/deviation to the drawing and provide that as soon as it is complete.

Pat

---

**From:** Patrick Smith  
**Sent:** Monday, June 26, 2017 9:16 AM  
**To:** Chris Provencal <cprovencal@dartaero.com>; Linda Lacelle <llacelle@dartaero.com>  
**Cc:** Mario Poulin <mpoulin@dartaero.com>; Robert Aboud <raboud@dartaero.com>; Chantal Lavoie <clavoie@dartaero.com>; Eric Downing <edowning@dartaero.com>; Patrick Duval <pduval@dartaero.com>; David Duval <dduval@dartaero.com>  
**Subject:** RE: material M2024T3T

Chris,

I will reach out to Airbus regarding this today and let you know. It's only a 21 page document.

Pat

---

**From:** Chris Provencal  
**Sent:** Monday, June 26, 2017 9:05 AM  
**To:** Patrick Smith <psmith@dartaero.com>; Linda Lacelle <llacelle@dartaero.com>  
**Cc:** Mario Poulin <mpoulin@dartaero.com>; Robert Aboud <raboud@dartaero.com>; Chantal Lavoie <clavoie@dartaero.com>; Eric Downing <edowning@dartaero.com>; Patrick Duval <pduval@dartaero.com>; David Duval <dduval@dartaero.com>  
**Subject:** RE: material M2024T3T

Engineering can create dwg M2024T3T for this material and there is no internal issue with using ASTM B210. My only question: the Airbus dwg doesn't call for that spec, do we need a disposition from Airbus to use this material?

Chris

---

**From:** Patrick Smith  
**Sent:** Monday, June 26, 2017 8:59 AM  
**To:** Linda Lacelle <llacelle@dartaero.com>  
**Cc:** Mario Poulin <mpoulin@dartaero.com>; Chris Provencal <cprovencal@dartaero.com>; Robert Aboud

<raboud@dartaero.com>; Chantal Lavoie <clavoie@dartaero.com>; Eric Downing <edowning@dartaero.com>; Patrick Duval <pduval@dartaero.com>; David Duval <dduval@dartaero.com>

**Subject:** RE: material M2024T3T

Linda,

This still requires a formal acceptance to the material which was received, whether it is airworthy or not.

We have launched a five year contract to supply these parts.

Can this spec be added to the BOM, so in the future we avoid this issue?

Pat

---

**From:** Linda Lacelle

**Sent:** Monday, June 26, 2017 7:09 AM

**To:** Patrick Smith <psmith@dartaero.com>; Patrick Duval <pduval@dartaero.com>

**Cc:** Mario Poulin <mpoulin@dartaero.com>; Chris Provencal <cprovencal@dartaero.com>; Robert Aboud <raboud@dartaero.com>; Chantal Lavoie <clavoie@dartaero.com>; David Duval <dduval@dartaero.com>; Eric Downing <edowning@dartaero.com>

**Subject:** RE: material M2024T3T

This is for SK145-0114-01 - Trailing Bar Assembly, Rotor Blade, Folding (661K1891-105A), not an airworthy part and is due to ship on July 25

L

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**From:** Patrick Smith

**Sent:** Saturday, June 24, 2017 1:15 PM

**To:** Patrick Duval <pduval@dartaero.com>

**Cc:** Mario Poulin <mpoulin@dartaero.com>; Chris Provencal <cprovencal@dartaero.com>; Robert Aboud <raboud@dartaero.com>; Chantal Lavoie <clavoie@dartaero.com>; Linda Lacelle <llacelle@dartaero.com>; David Duval <dduval@dartaero.com>; Eric Downing <edowning@dartaero.com>

**Subject:** RE: material M2024T3T

Pat,

Is there an urgent requirement for the use of the material, if there is the material can be issued to a work order under positive recall according the QSI 020 chapter 6.2.

I would suggest that we talk to Chris, Robert and Mario to ensure we are all on the same page for releasing this material.

Pat

---

**From:** Patrick Duval

**Sent:** Saturday, June 24, 2017 6:36 AM

**To:** Patrick Smith <psmith@dartaero.com>

**Subject:** FW: material M2024T3T

**Importance:** High

Following up on this...

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**From:** Patrick Duval

**Sent:** Tuesday, June 20, 2017 2:58 PM

**To:** Patrick Smith <[psmith@dartaero.com](mailto:psmith@dartaero.com)>; Chris Provencal (<[cprovencal@dartaero.com](mailto:cprovencal@dartaero.com)> <[cprovencal@dartaero.com](mailto:cprovencal@dartaero.com)>

**Cc:** Mario Poulin (<[mpoulin@dartaero.com](mailto:mpoulin@dartaero.com)> <[mpoulin@dartaero.com](mailto:mpoulin@dartaero.com)>; Robert Aboud (<[raboud@dartaero.com](mailto:raboud@dartaero.com)>

<[raboud@dartaero.com](mailto:raboud@dartaero.com)>; Chantal Lavoie (<[clavoie@dartaero.com](mailto:clavoie@dartaero.com)> <[clavoie@dartaero.com](mailto:clavoie@dartaero.com)>; Linda Lacelle

(<[llacelle@dartaero.com](mailto:llacelle@dartaero.com)> <[llacelle@dartaero.com](mailto:llacelle@dartaero.com)>; David Duval (<[dduval@dartaero.com](mailto:dduval@dartaero.com)> <[dduval@dartaero.com](mailto:dduval@dartaero.com)>; Eric

Downing (<[edowning@dartaero.com](mailto:edowning@dartaero.com)> <[edowning@dartaero.com](mailto:edowning@dartaero.com)>

**Subject:** FW: material M2024T3T

**Importance:** High

Pat,

The material that we received for the Airbus SK 145 doesn't have the spec that airbus ask on their drawings (see attach for detail), will this be acceptable and who can deviate Airbus drawing. This will need to be looked in pretty quick, because production will be asking for it.

Pat. D.

---

**From:** Patrick Duval

**Sent:** Monday, June 19, 2017 4:35 PM

**To:** Chris Provencal (<[cprovencal@dartaero.com](mailto:cprovencal@dartaero.com)> <[cprovencal@dartaero.com](mailto:cprovencal@dartaero.com)>

**Cc:** Robert Aboud (<[raboud@dartaero.com](mailto:raboud@dartaero.com)> <[raboud@dartaero.com](mailto:raboud@dartaero.com)>; Chantal Lavoie (<[clavoie@dartaero.com](mailto:clavoie@dartaero.com)>

<[clavoie@dartaero.com](mailto:clavoie@dartaero.com)>

**Subject:** material M2024T3T

Chris,

Can you please look at NCR17-6460. I can see from your email that material M2024T3T should be as per AMS-QQ-250/4 specs, but we actually receive material par ATSM B210-12. Please look into this ASAP, if this material doesn't conform we will need to send it for replacement.

Pat Duval

QC Coordinator

T: 1-613-632-5200 ext. 288

F: 1-613-632-5246

[www.dartaero.com](http://www.dartaero.com)

[pduval@dartaero.com](mailto:pduval@dartaero.com)





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO36617

Purchase Order Date 6/8/2017

PO Print Date 6/8/2017

Page Number 1 of 2

**Order From :**

VU-TWM001

**Ship To :** DART AEROSPACE LTD

TW METALS  
PO BOX 933014  
ALTANTA, GA 31193-3014  
US

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

E-MAILED

JUN 08 2017

**Contact Name**

**Vendor Phone** 585 768 5600

**Ship To Contact**

**Ship To Phone**

**Ship Via:** YRC COLLECT

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms**

Net 30

**Currency**

USD

**FOB**

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
Line Comments			Promise Date				
Delivery Comments							

1	M2024T3T1.000W.065	2024T3 Tubing 1" OD x 0.65" Thick	6/16/2017		36.00	\$7.50	\$270.00
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Yes

f

6/16/2017

AS PER MATERIAL 2024-T3 ROUND TUBING, MAT'L SPEC'S AMS-QQ-A-250/4

Line Total:

\$270.00

2	71401-45	PROCUREMENT QUALITY CLAUSES	6/16/2017		1.00	\$0.00	\$0.00
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No

6/16/2017

**Procurement Quality Clauses**

A005 right of entry

A012 chemical and physical test report

A016 personnel qualification

A017 raw material identification

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents

8/17-6-13

Note:

6/8/2017



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

**Purchase Order ID PO36617**

**Purchase Order Date** 6/8/2017

**PO Print Date** 6/8/2017

**Page Number** 2 of 2

---

**Order From :**

VU-TWM001

TW METALS  
PO BOX 933014  
ALTANTA, GA 31193-3014  
US

**Ship To :** DART AEROSPACE LTD

1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

---

**Contact Name**

**Vendor Phone** 585 768 5600

**Ship To Contact**

**Ship To Phone**

**Ship Via:** YRC COLLECT

**Ship Acct:**

**Buyer**

Chantal Lavoie

**Customer POID**

**Customer Tax #** 10127-2607

**Terms** Net 30

**Currency** USD

**FOB** FCA – (Free Carrier)

**Line Total:** \$0.00

**PO Total:** \$270.00

**Note:** Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

**Change Nbr:** 1

**Change Date:** 6/8/2017